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SUPPLEMENT,

1903,

RELATING TO THE

BAY OF BENGAL PILOT.

THIRD EDITION,

1901.

CORRECTED TO JUNE 1903.

PUBLISHED BY ORDER OF THE LORDS COMMISSIONERS OF THE ADMIRALTY.

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This supplement contains the latest information received in the Hydrographic Department of the Admiralty since the publication, in 1901, of the Third edition of the Bay of Bengal Pilot; it is derived chiefly from surveys of the Marine Survey Department of India, and notices from the Indian Government. All notices to Mariners relating to the above work, including No. 389 of 1903, are incorporated in this supplement.

HYDROGRAPHIC DEPARTMENT,
ADMIRALTY, LONDON,
June, 1903.

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HYDROGRAPHIC DEPARTMENT,
ADMIRALTY, LONDON,
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SUPPLEMENT,

1903,

RELATING TO THE

BAY OF BENGAL PILOT.

[THIRD EDITION, 1901.]

(*Corrected to June* 1903.)

CHAPTER I.

CEYLON.—Population.—The estimated population at the end of 1901 was 3,619,165. p. 3.

Trade.—The value of the imports, including specie, for 1901 was 112,626,926 rupees, and exports 102,840,348 rupees. The export of tea amounted to 145,188,244 lbs.

Shipping.—During the year 1901, 3,367 vessels of 4,557,607 tons entered, and 3,436 vessels of 4,470,963 tons cleared the ports of the island.

PASSAGES.—Aden to Ceylon and Bay of Bengal.— p. 70.
From April to October vessels should invariably pass north of Sokotra to avoid the heavy cross seas to the southward of it during the S.W. Monsoon, but in all seasons of the year it is advisable to avoid passing south, if Abd-al-Kuri is to be made at night, as the currents are often strong to the northward. (*See* chart No. 1078.)

CHAPTER II.

COLOMBO.—Breakwater lights.—The light vessel which now shows a *fixed red* light off the end of the rubble mound of the N.W. breakwater is moved as the work advances. In February 1902 she was moored with the *red* light at the end of the S.W. breakwater bearing S. 35° W., distant about 320 yards. Vessels must not pass north of this light vessel. (*See* chart No. 914.) p. 73.

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SUPPLEMENT.

1902

BAY OF FUNDAL PILOT.

(Please see page 65.)

CHAPTER I.

CAYLOC.—Population.—Since the estimated population at the end of [illegible]

Exports.—The value of the exports, in lighter goods, for 1901 was £[illegible] [illegible] and [illegible] shipments in 1900. The export of tea amounted to [illegible] lbs.

Shipping Entered.—During the year 1901, 3,337 vessels of 1,257,097 tons entered, and 3,313 vessels of 1,279,283 tons cleared the ports of the island.

SEASONS.—Advice to Captains and Ships of Draught.—From April to October vessels should invariably put to sea of Skaira to avoid the heavy cross seas in the southward of the S.W. Monsoon, but in all seasons of the year it is advisable to keep plenty room, if Adad Knoll is to be unable to pick up the currents are often strong to the northward. (See chart No. 10[illegible])

CHAPTER II.

COLOMBO.—Breakwater Lights.—The [illegible] vessel which [illegible] now shows a fixed red light of the second of the red to mound of the N.W. breakwater is moved to the work advances. In February 1902 she was moored with the red light at the end of the S.W. breakwater bearing S. 27° W., distant about 300 yards. Vessels must not pass north of this light vessel. (See chart No. 911.)

[illegible] 1900—7 [illegible] Mr. 1902.

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Pilots.—Night Signals.—Vessels arriving off Colombo at night must not come within half a mile of the *red* light on the S.W. breakwater, when the *red* light is shown from the flagstaff in answer to their signal, until they see the pilot boat, showing a flare up occasionally, approaching them. (*See* chart No. 914.) p. 73.

Water.—Vessels requiring water should hoist Commercial flag S., when the water tank will be brought alongside. p. 75.

Harbour Works.—The dry dock is to be increased to 700 feet in length, 18 new coaling jetties of 150 feet in length are to be built under the N.W. breakwater, a separate fishery harbour may be constructed and a new wet dock with an area of 187 acres is proposed. (*See* chart No. 914.) p. 75.

Time Signal.—The time signal is made every day, Sundays and public holidays included. (*See* chart No. 914.) p. 75.

HAMBANTOTTI.—A *fixed red* light is shown, at an elevation of 50 feet from the southern point of entrance to Hambantotti bay. (*See* chart No. 813.) p. 96.

TRINCOMALI.—Submarine Mine Field.—Three black and white chequered buoys lie at the following bearings and distances from the eastern point of Small Sober island, viz.:—S. 58° E. 245 yards, N. 85° E. 280 yards, and N. 47° E. 500 yards. Vessels must pass to the eastward of these buoys. (*See* plan No. 816.) p. 113.

A stone causeway has been built joining the western point of Small Sober island with Great Sober island. (*See* plan No. 816.) p. 114.

Quarantine.—Ships in quarantine are required to anchor to the north-westward of York shoal. (*See* plan No. 816.) p. 115.

CHAPTER III.

Chuttram (Chuttrums).—Light.—A *fixed white* light has been established at this place. It is shown from a mast and is intended as a guide to vessels making the port of Pambam. Approximate lat. 9° 12′ N., long. 79° 22½′ E. (*See* chart No. 68*a*.) p. 128.

PAMBAM PASS.—Light.—The light shown from the light-house on the north-west point of Rameswaram island is a *white group occulting* light showing groups of *four* occultations *every minute* and is visible in clear weather for a distance of 14 miles. (*See* chart No. 69.) p. 129.

Pambam Pass.—Numerous beacons marking the channel from the Puma East and Kundugal channels through the Pambam pass have been erected. (*See* chart No. 69.) p. 129.

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Horseshoe bank.—The south-east Sandbank channel buoy has been permanently removed. (*See* chart No. 69.) p. 131.

Kundugal channel.—The Kundugal gut buoy has been permanently removed. (*See* chart No. 69.) p. 132.

Puma East Channel.—The red and black buoys in the Puma east channel have been permanently removed. (*See* chart No. 69.) p. 132.

Tondi.—Light.—The *fixed red* light at Tondi has been altered to a *fixed white* light, but the light is otherwise unchanged. (*See* chart No. 68*a*.) p. 136.

Ammapatam.—Temporary Light.—Whenever a steamer is expected at this place after sunset, a temporary *white* light will be shown from the Port flagstaff at a height of 46 feet, and visible in clear weather for a distance of 5 miles. (*See* chart No. 68*a*.) p. 136.

Point Calimere.—Light.—This light is now a *white flashing* light giving one flash *every twenty seconds*, elevated 42 feet above high water and visible in clear weather for a distance of 12 miles. It is shown from a cement tower 52 feet high. p. 138.

Approximate lat. 10° 17½′ N., long. 79° 52¼′ E. (*See* chart No. 71.)

CHAPTER IV.

COROMANDEL COAST.—The coast.—The coast should not be approached nearer than the 10-fathom line in the neighbourhood of Negapatam shoal. The two dark-coloured pagodas 5 miles northward of Point Calimere already alluded to are the only distinguishable marks between Point Calimere and Negapatam. (*See* chart No. 71.) p. 139.

Negapatam Shoal.—Composed of hard sand and stones is about 6 miles long in a N. ½ E. direction and about ½ mile broad; the general depth over it is from 4 to 5 fathoms, with several knolls of 3¼ to 3¾ fathoms; the least water found in 1901 was 20 feet, but a depth of less than 3 fathoms was reported in 1860. The northern end of the shoal, situated in lat. 10° 40½′ N., long. 79° 55¾′ E. is steep-to, with depths of 7 fathoms outside and 6 fathoms inside it; the southern end is ill-defined. (*See* chart No. 71.)

Landmarks.—The tall spire of Negapatam church, two chimneys of the South Indian railway workshops and the minaret at Nagar, 148 feet high, with four similar but smaller towers close by, afford conspicuous marks for fixing a vessel's position in the vicinity of Negapatam. (*See* chart No. 71 with plan.) p. 140.

Light.—It is intended to alter this light from a *fixed* to a *white group occulting* light giving four eclipses every minute. During the alterations, p. 140.

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commencing 1st March 1903, a provisional *white fixed* light will be shown from the gallery of the lighthouse, and this should be visible from a distance of 10 miles. (*See* chart No. 71.) p. 140.

Directions.—Vessels bound to Negapatam round the north end of Ceylon should not shoal to less than 10 fathoms near Pedro shoal, nor 8 fathoms off the Middle banks, and 10 fathoms between Point Calimere and Negapatam. When nearing Negapatam keep the conspicuous church spire on, or to the westward of N. 50° W. which leads one mile north of Negapatam shoal. (*See* chart No. 71.) p. 140.

Currents.—Vessels making the east coast of India should bear in mind that it is not at all unusual to experience currents setting from 2 to 3 knots in the offing. From February to July a strong current to the northward, and from October to December to the southward may be expected, but is not always experienced. During the progress of the survey in 1901 currents from 1 to 2 knots were experienced outside the 20-fathom contour line, decreasing between the 20 and 10-fathom lines, with little or none inside the latter, whilst close in to the coast the current was occasionally reversed. A set was usually found out of Palk strait when the current was running to the northward in the offing, and it is presumed that the reverse takes place when the current runs to the southward. Close in shore tidal streams are felt and they vary the strength of the current in the neighbourhood of the Middle bank. (*See* chart No. 71.) p. 141.

Coal.—The South Indian railway company do not undertake to supply vessels with coal except in cases of necessity. (*See* chart No. 71.) p. 141.

KARIKAL.—Light.—From a crossyard on a beacon tower is exhibited the *fixed white* lantern light at an elevation of 45 feet, and which is visible from a distance of 8 miles. Vessels can communicate with this tower by the international code of signals. (*See* chart No. 71.) p. 142.

Landmarks.— When approaching Karikal from the northward (after passing Tranquebar) the dome of the church, which stands rather more than a mile back from the beach, and the beacon tower, from which the light is hoisted, are the first conspicuous objects that will be seen. (*See* chart No. 71.)

Anchorage off Karikal, said to be the best on the Coromandel coast, may be had in from $4\frac{3}{4}$ to 6 fathoms, sand and mud, with Karikal light bearing W. $\frac{1}{2}$ S. (*See* chart No. 71.) p. 142.

Current.—The current is generally inappreciable close in shore, but sets strongly in the offing, to the northward from February to July, and to the southward from October to December. (*See* chart No. 71.) p. 143.

Signal.—A blue flag hoisted at the beacon tower indicates "The bar is heavy and all communication prohibited." (*See* chart No. 71.) p. 143.

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TRANQUEBAR.—Was originally a place of some importance, but has now dwindled into insignificance. The best buildings are in ruins. The old port of Dansborg, some large white houses and the large look-out tower render it recognisable from the offing. The sea has encroached considerably abreast the fort; protective groynes, which should not be approached too closely in boats, extend about a cable seaward. (*See* chart No. 71.) p. 143.

Anchorage.—May be had with Tranquebar fort bearing W. by N. in 5½ to 6 fathoms, about ¾ mile off shore. (*See* chart No. 71.) p. 144.

Trade and Supplies.—There is now but little trade at Tranquebar. Fresh meat and vegetables are procurable only in small quantities. (*See* chart No. 71.) p. 144.

Cauverypatam.—About 7 miles northward of Tranquebar is Cauverypatam, to the northward of which the land behind the sandy beach begins to rise slightly. From Point Calimere to Cauverypatam it is low and flat. (*See* chart No. 71.) p. 144.

Thirumalavasal.—Flagstaff.—This flagstaff is the only landmark on this part of the coast; it can be seen over the tops of the trees when approaching from the southward. (*See* chart No. 71.) p. 144.

Coleroon river, the south boundary of the South Arcot district, discharges itself into the sea by two mouths, one 10 and the other 13½ miles to the northward of Thirumalavasal, the southern of these has only recently opened and a shoal has formed extending 6 cables off it on which the sea breaks heavily during the strength of the N.E. Monsoon. The four Chillumbrum pagodas situated S. 38° W. 7 miles from Porto Novo flagstaff can be distinctly seen over the trees abreast the Coleroon river. Coleroon wood is not now distinguishable. (*See* chart No. 71.) p. 144.

Coleroon Shoal.—Cancel and substitute:—

Coleroon point, formed by a long sandy spit, just above high water extending 3½ miles to the northward of the southern entrance of the Coleroon river. It is difficult to distinguish from seaward as there is no vegetation on it. Numerous sandbanks cover and uncover between Coleroon point and the mainland, a distance of 1½ miles in a W.N.Wly. direction. p. 144.

Directions.—Ships should not close the coast nearer than 4 miles at night; at this distance from the shore off Coleroon Point, and for 10 miles south of it, they will be in 20 fathoms, but north of it they will be in 10 fathoms. It should be borne in mind that the 10 fathoms line of soundings only passes a little over a mile outside the shoal water off Coleroon point. In proceeding towards the anchorage at Porto Novo p. 145.

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from the southwards keep outside the 10 fathom line until Porto Novo flagstaff bears W. by N., then steer for the anchorage. (*See* chart No. 71.) p. 145.

Anchorage.—From about the middle of October to nearly the end of December, vessels should anchor 2 to 3 miles off shore in from 6 to 9 fathoms with the flagstaff bearing W. by S., but after January when the fine weather has set in, and during the S.W. monsoon, vessels may anchor close in according to their draught. (*See* chart No. 71.) p. 145.

Communication by rail exists with Madras and Negapatam. Porto Novo is a port of call for the B.I.S.N. Company's steamers. (*See* chart No. 71.) p. 145.

CUDDALORE.—The European community reside at Fort St. David, about 2 miles to the northward of the port. (*See* chart No. 71.) p. 145.

Light.—Instead of *fixed red* light a *white group occulting* light is shown, giving *four occultations every minute.* It is visible in clear weather for a distance of 12 miles. p. 146.

Approximate lat. 11° 43′ N., long. 79° 47′ E. (*See* chart No. 71.)

Cuddalore flagstaff is on a sandhill, and most conspicuous, with a white building close to it. p. 146.

The Bar of the Guddilam river has 3 feet over it at low water springs. Cargo boats discharge at a jetty near the custom house. (*See* chart No. 71.)

Anchorage may be obtained in from 5 to 6 fathoms with the flagstaff bearing W.N.W.; this is the most convenient berth for communication with the shore. (*See* chart No. 71.) p. 146.

Communication by rail exists with Madras and Negapatam. Cuddalore is a regular port of call for the B.I.S.N. Company's coasting steamers. (*See* chart No. 71.) p. 146.

Trade and Supplies.—There is considerable trade at Cuddalore, and many large steamers load here with ground nuts and oil for the French ports. The principal exports are ground nuts, oil, pomae, palmyra jaggery, sugar, raw spirit, rice, and paddy, valued at 52 lákhs of rupees. The principal imports are coal, timber, spices, European stores and provisions, valued at 7 lákhs of rupees. Bread, meat, poultry, vegetables, and fruit may be had in any quantity, and are cheap and good. Fresh water can be supplied at the rate of 1 rupee for 1,000 gallons. (*See* chart No. 71.) p. 146.

Coal.—A large quantity of coal is kept for the South Indian railway, but the authorities do not undertake to supply vessels except in case of necessity. (*See* chart No. 71.) p. 146.

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PONDICHERRI.—The population of the town in 1900 was 45,583. p. 146.

The district of Pondicherri is much scattered, and has a total area of 112 square miles, with a population of 174,456 in 1900.

From the offing Pondicherri may be recognized by the high land, 180 to 240 feet high, a little inland, and to the northward of the town. The cathedral, lighthouse, and a high factory chimney, recently erected 1·3 miles W.S.W. from the lighthouse, and which can be seen from a great distance, are conspicuous. (*See* chart, with plan, No. 71.)

Anchorage.—Vessels should anchor in from 6 to 7 fathoms, with the lighthouse bearing W.N.W., distant 1 mile. From October to December, when bad weather may be expected, it is advisable to anchor about half a mile further out, in from 8 to 9 fathoms; a long scope of cable is recommended, and precautions against bad weather should always be taken. (*See* chart, with plan, No. 71.) p. 147.

Supplies.—Supplies for shipping can be obtained at Pondicherri but are very expensive. p. 148.

Landing, except at the pier, in very fine weather, should not be attempted in ships' boats.

Trade.—The total number of British vessels to and from the United Kingdom and British colonies was as follows:—Entered, 226, with a tonnage of 428,407, and cleared 215 with a tonnage of 390,773. (*See* chart, with plan, No. 71.) p. 148.

The Coast from Pondicherri continues its N. by E. trend for 6 miles and then takes a N.E. by N. direction for 31 miles to **Palar river,** a considerable stream, the mouth of which is completely closed to the sea in the dry season. There is communication by canal between the Palar river and Madras. p. 149.

Breakers extend about $\frac{1}{3}$ mile, and a spit with $2\frac{3}{4}$ fathoms on it nearly one mile, from the shore off the mouth of the Palar river. The nature of the country is low and sandy, with the exception of the slight elevation of 240 feet close to Pondicherri, and a few low and detached hills from 300 to 600 feet high, standing a considerable distance inland to the northward of Pondicherri; these hills can be seen from a ship at a distance of 5 or 6 miles from the coast. (*See* chart No. 71.)

Palar river.—For description *see* above. p. 149.

Sadras hills.—Situated 10 miles N.W. by N. from the entrance to the Palar river, are the most conspicuous hills on this part of the coast. The highest of the range is wooded and 650 feet high; close to it is Finger peak, 500 feet high, which cannot fail to be recognised from the peculiar appearance of the temple on its summit. Tirumani hill, 758 feet, and p. 149.

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Patavarakam hill, 703 feet above high water, 5¼ miles N.W. by W. ½ W. p. 149.
and 6¼ miles N.N.W. respectively from Finger peak, with smaller hills clustered round them, are conspicuous from seaward. (*See* chart No. 575.)

Mahabalipur or Seven pagodas is a rocky point 9 miles to the northward of the entrance to the Palar river. The pagoda from which the old light was exhibited is the only one visible from seaward. (*See* chart No. 575.)

Tripalur reef is a rocky ledge, parts of the inshore ends of which p 150.
are awash, extending ¾ mile off Mahabalipur. There is a depth of 4½ fathoms on the outer edge of the reef, and 6½ fathoms close to. (*See* chart No. 575.)

Rockingham patches.—The least water found on these patches p. 150.
during the survey of 1900 was 15 feet, although a depth of 11 feet was reported in 1860. This 15 feet patch lies 4½ miles N. 34° W., from Mahabalipur lighthouse and one mile off-shore; it is small and stands on the outer edge of uneven ground, with 4 to 5 fathoms on it, one mile in extent and running parallel with the shore, and having a depth of 5½ fathoms between it and the shore; two isolated rocky nobs having 3¾ fathoms on them and deep water all round lie ¾ mile N.E. and 1¼ miles S.S.W. ½ W. from the shoalest water and at distances of 1½ and ¾ mile respectively from the shore. The 10 fathom contour-line passes ¾ mile and the 15 fathom line 2 miles outside the outer patch of 3¾ fathoms. (*See* chart No. 575.)

Covelong.—One of the earliest European settlements, but now of no p. 150.
importance. It is situated 11 miles to the northward of Mahabalipur light and 18 miles to the southward of Madras and contains a Roman Catholic church and a few European bungalows on the south bank of a river, which here finds its outlet into the sea, and which connects with Sadras by backwater, and Madras by canal. The church and bungalows are almost entirely hidden by trees. (*See* chart No. 575.)

Covelong point juts out from the coast just south of Covelong p. 150.
but is hardly distinguishable from the rest of the coast, except when close in shore. Rocks awash extend about ⅓ mile N.E. of the point under which good landing may be had in the S.W. monsoon. (*See* chart No. 575.)

Anchorage may be had in 7 fathoms with Covelong bearing West p. 150.
distant one mile. (*See* chart No. 575.)

Landmarks.—Ottivakam hills, the highest of which, 548 feet, sharp p. 150.
and conspicuous and situated 8½ miles N. 85° W., from Covelong point, is near the southern end of a low range of hills about 5 miles long running north and south. Palavaram, a double-peaked hill with a temple on its

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summit 499 feet high, and St. Thomas' Mount crowned with white buildings 250 feet above high water are conspicuous from seaward. Among the conspicuous buildings in the town of Madras, the law courts, native college and St. Andrew's and Fort churches are easily recognised. (*See* chart, with plan, No. 575.) p. 150. p. 151.

Pulicat.—Light.—The *fixed white* light at Pulicat has been altered to a *flashing white* light *every five seconds* shown from a height of 68 feet and visible from a distance of 14 miles. p. 159.

Approximate lat. 13° 25′ N., long. 18° 20′ E. (*See* chart No. 575.)

Armagon.—Light.—A *white group flashing* light showing *three flashes* in quick succession every *ten seconds* elevated 97 feet above high water and visible in clear weather for a distance of 15 miles is exhibited from a masonry column erected near the village of Monapallium, Armagon. p. 160.

Approximate position, lat. 13° 53′ N., long. 80° 12′ E. (*See* chart No. 575.)

Masulipatam.—Light.—On the 1st January 1903 the light at Masulipatam was altered from a *fixed* to a *white group occulting* light giving *four occultations every minute*. (*See* plan on chart No. 1894.) p. 168.

Sacramento light.—The *fixed red* light has been altered to a *white flashing* light *every five seconds*. It is shown from a concrete tower at a height of 140 feet and is visible in clear weather from a distance of 18 miles. p. 172.

Approximate lat. 16° 35′ N., long. 87° 17′ E. (*See* chart No. 1711.)

Hope island.—Light.—This light has been discontinued. (*See* chart No. 1711.) p. 173.

CHAPTER V.

Vakalapudi.—Light.—This light is now shown as a *white group flashing* light showing *three flashes* in quick succession every *ten seconds*. p. 174.

Approximate lat. 17° 01′ N. long. 82° 17′ E. (*See* chart No. 1711.)

COCANADA BAY.—The water in the bay was found in March 1903 to have shoaled 2 to 3 feet. Point Godavari had extended one mile to the W.N.W. The beacon, 4 miles south of Point Godavari, and Golaiga obelisk on the west side of the bay are no longer in existence. (*See* plan on No. 1711.) p. 175.

Vizagapatam.—Temporary light.—When a steamer is expected a white light visible 10 miles in clear weather is shown from the roof of a small whitewashed building near the port flagstaff. It is intended to establish a *fixed white* light elevated 40 feet and visible 12 p. 180.

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miles between the bearings of N. 10° W., through West and S. 55° W. The tower to be 52 feet high situated near the flagstaff. (*See* plan on chart No. 239.) p. 180.

Santapilli.—Light.—On the 1st July 1903 it is intended to alter the character of this light to a *white group flashing* light showing groups of *two flashes every ten seconds.* It will be shown at a height of 140 feet from a concrete tower 73 feet high erected on the beach, and will be visible in clear weather from a distance of 18 miles. Approximate latitude 18° 04′ N., longitude 83° 38½′ E. (*See* chart No. 1424.) p. 183.

Dhamra river.—Buoy.—In February 1903 the "E" buoy South channel was in 30 feet at low water with the old lighthouse structure bearing S. 42° E. distant 10¾ cables, and the course into "E" buoy was W.S.W. (*See* chart No. 754.) p. 205.

CHAPTER VI.

Balasor.—Light.—The light shown from the Chandipur flagstaff is visible from S. 35° W. through north to N. 35° E. (*See* plan No. 239.) p. 209.

Meghna river.—The bore.—At the time of the equinoxes, especially with a southerly wind, the bore attains its greatest development, when it advances like a wall topped with foam. This has been estimated to be nearly 20 feet high and to travel at the rate of 15 miles an hour, but this is probably a considerable exaggeration. (*See* chart No. 859.) p. 242.

KARNAFULI RIVER.—In March 1903 the least depth in the channel was 11 feet, on the inner bar. (*See* plan No. 84.) p. 245.

CHAPTER VII.

St. Martin's reef.—This is a long ridge of rocks one of which is awash at low-water springs. This rock is situated 2½ miles N. 58° E. from the position shown on the Admiralty charts, and 5½ miles S. 73° W. from the northern extremity of St. Martin's island. Foul ground extends to a distance of 4 cables S. 76° W., 6 cables S. 13° E., 4 cables N. 76° E., and 2$\frac{4}{10}$ miles N. 13° W. from the rock awash. The reef does not usually break in the north-east monsoon season, but always does so when there is any swell, or in heavy weather. Approximate position, lat. 20° 36¾′ N., long. 92° 12¾′ E. (*See* chart No. 821.) p. 253.

Oyster reef.—Beacon.—A red pile beacon surmounted by a globe has been erected in 3 fathoms on the east side of Oyster reef. The structure is 33 feet high. As the reef extends to the westward and south-westward of the beacon vessels should give it a wide berth in passing. (*See* chart No. 821.) p. 254.

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Buoy.—The buoy ¾ mile to the southward of the Oyster reef has been withdrawn. (*See* chart No. 821.) p. 255.

CHAPTER VIII.

Olehleh.—Light.—The fixed red light is no longer shown from the western pier. (*See* chart No. 219.) p. 280.

Sabang Bay.—Light.—The light on Masam point is a *fixed white* light shown at a height of 50 feet from an iron framework 47 feet high, and is visible in clear weather from a distance of 10 miles. (*See* plan No. 2201.) p. 284.

Sabang bay.—The wharves will shortly be lengthened to 980 feet. p. 285.

There are five mooring buoys off the wharves to facilitate going alongside and hauling off.

Water is supplied at the price of 2 francs per ton.

There is a slipway for small vessels.

Buoys.—Three white can buoys have been moored in the bay close outside the 3 fathom line; one lies off the northern end of Kelas island, one is about W. by S. and one about N.W. of Oleh Bateh point. (*See* chart No. 2201.) p. 285.

GREAT NICOBAR.—Lafúl anchorage.—Steer in with the middle of the southern half of the sandy beach, conspicuous from seaward, bearing West, and anchor just before the south point of the bay shuts out the coast to the southward. Caution is necessary, as the water shoals suddenly. (*See* plan on chart No. 840.) p. 293.

Kondul island.—Anchorage may be had on the eastern side of the island in 7 fathoms, at about ½ mile from the shore. (*See* plan on chart No. 840.) p. 293.

West Coast.—Anchorage may be had between the villages of Kopen-hiat and Tae-angha at about one mile from the shore in 15 fathoms. Great care should be exercised in approaching the coast hereabouts, as numerous shoals are reported to exist from 3 to 5 miles off shore. (*See* chart No. 840.) p. 294.

Casuarina bay is a good anchorage in the N.E. monsoon; a depth of 11 fathoms will be found about 1 mile south of the north-west point of the bay. (*See* chart No. 840.) p. 294.

LITTLE NICOBAR.—Menchál.—Anchorage may be had in fine weather at ½ mile south-west of this island in from 6 to 7 fathoms; the tides are reported very strong, especially at springs. (*See* chart No. 840.) p. 295.

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Trak and Treis.—Ships have anchored ¾ mile N.E. of Trak in 6 fathoms, but the bottom is uneven and the tides very strong. (*See* chart No. 840.) p. 295.

Meroe.—Landing is only practicable in the finest weather. The tides are reported to set at the rate of 3 knots in its vicinity. (*See* chart No. 840.) p. 295.

KACHAL.—East Bay.—Anchorage may be had with the east point of the bay S. 30° E. distant one mile, but the soundings are reported to be very irregular, varying from five fathoms to no bottom at 20 fathoms. (*See* chart No. 840.) p. 295.

Hoinipoh.—Just south of East bay, in lat. 7° 57′ 40″ N., long. 93° 25′ 12″ E., affords good anchorage in 8 fathoms with the village bearing S. 80° W. distant 3 cables, and is much frequented by vessels trading to Kachal island. (*See* chart No. 840.) p. 295.

West Bay.—Anchorage may be had off this bay in 9 fathoms at a distance of about one mile S.S.W. of the north-west point of the bay. A south-westerly swell is reported to sometimes set into the bay during the N.E. monsoon, and a 2 knot tide across the entrance. Good landing can be had inside the N.W. point of the bay. (*See* chart No. 840.) p. 295.

KAMORTA.—Dring harbour.—Can only be entered by boats, but anchorage may be had outside in 10 fathoms about ½ mile west of the entrance. (*See* chart No. 840.) p. 296.

Koi-hoa.—Anchorage may be had off this village in from 7 to 9 fathoms about one mile off shore, but Perseus reef is reported to afford no protection in the S.W. monsoon. (*See* chart No. 840.) p. 296.

Moshoit.—The reef off this village is easily seen with a good light and anchorage may be obtained about 2 cables N.E. of it with the north-east extreme of Kamorta island N. 14° E. and the north-east extreme of Trinkut S. 48° E. (*See* chart No. 840.) p. 296.

TILANCHONG.—Castle bay is a fair anchorage in fine weather, but care should be taken to avoid a rock reported about a quarter of a mile south of Castle bay point, which can be seen in a good light; there is deep water between it and the shore. (*See* chart No. 840.) p. 299.

TERESSA.—Laski.—This village, consisting of three or four huts, can easily be made out from seaward, and an anchorage obtained abreast of it about ¾ mile off shore. Landing can often be effected through an opening in the reef here when it is unsafe at Hinám. (*See* chart No. 840.) p. 299.

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Hinám.—This village is only visible from seaward on a N.E. bearing. Anchorage may be had in from 6 to 14 fathoms close in to the shore. Landing is not always practicable even in the N.E. monsoon. There is a good path across the island to Keráwa. (*See* chart No. 840.) p. 299.

Keráwa.—There is no safe anchorage off Keráwa, a depth of 27 fathoms being found ¼ mile from the shore. (*See* chart No. 840.) p. 299.

Haoin or Bengála.—Ships have anchored here; it is not a safe anchorage, but there is good landing. (*See* chart No. 840.) p. 299.

BOMPOKA.—Póahat.—Anchorage may be had in 14 fathoms about 2½ cables off the shore at Póahat with the village in line with the North peak bearing N. 40° E. The water shoals rapidly and caution is necessary when anchoring. Yams, bananas and papaia can be purchased here. (*See* chart No. 840.) p. 299.

CHAURI.—Sánéwya.—Anchorage may be had in 9 to 10 fathoms ½ mile off shore abreast this village. The only cooking pots made in the Nicobars come from this island. The natives are morose in disposition and disliked by the other islanders. Limes are plentiful. (*See* chart No. 840.) p. 299.

BATTI MALV.—Indifferent anchorage may be had N.W. of this island. The landing is bad. (*See* chart No. 840.) p. 299.

KAR NICOBAR—Orong.—Stand in with the village bearing East and anchor in from 9 to 11 fathoms at about ½ mile from the shore. Landing is practicable in fine weather but requires care as the channel between the rocks is only 20 feet wide. (*See* chart No. 840.) p. 300.

Mús.—Anchorage may be had, with the village bearing S. 40° W., 4 cables, in from 7 to 8 fathoms. Tides are said to run at the rate of 4 knots at springs and one vessel is reported to have dragged in consequence. (*See* chart No. 840.) p. 300.

Lapáti.—Anchorage may be had N.E. of this village in 12 fathoms about ½ mile from the shore. (*See* chart No. 840.) p. 300.

Tamálu, Perka and **Malacca.**—Anchorage may be had off these villages in 14 fathoms about 1½ mile from the shore and landing effected in ordinary monsoon weather. (*See* chart No. 840.) p. 300.

ANDAMAN ISLANDS.—North brother.—Shoal.—A crescent-shaped shoal patch is reported to lie in lat. 11° 01′ 15″ N. and long. 92° 41′ E. with North brother island bearing S. 40° W. distant 2¾ miles. The least depth obtained was 5 fathoms, sand. (*See* chart No. 1,398.) p. 303.

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Hinkun.—This village is only visible from seaward on a N.E. bearing, 2 miles. Anchorage may be had in from 6 to 14 fathoms close in to it. Landing is not always practicable even in the N.E. monsoon. There is a good path across the island to Kotáwa. (See chart No. 840.)

Kotáwa.—There is no safe anchorage off Kotáwa, a depth of 27 fathoms being found ½ mile from the shore. (See chart No. 840.)

Hoin or Berkéla.—Small boats anchored here: it is not a safe anchorage, but there is good landing. (See chart No. 840.)

Bompoka.—Tóahat.—Anchorage may be had in 11 fathoms, about 2½ cables off the shore at Tóahat with the village in line with the North peak bearing N. 40° E. The water shoals rapidly and caution is necessary when anchoring. Yams, bananas and pigs can be purchased here. (See chart No. 840.)

Chauti.—Sóroya.—Anchorage may be had in 5 to 10 fathoms, ¾ mile off shore about this village. The only safe landing place is on Nicobars come from this island. The natives are hostile. (See chart No. 840.)

Batti Maiv.—Indifferent anchorage may be had N.W. of this island. The landing is bad. (See chart No. 840.)

Kar Nicobar.—Orong.—Stood in with the 20 fm. line, 2 miles east and anchored in from 9 to 11 fathoms at 2 cables from the shore. Landing is practicable in fine weather at half tide, as the coral between the rocks is covered with 2 to 3 feet of water. (See chart No. 840.)

Mus.—Anchorage may be had with the 20 fm. line 5 cables, 4 cables in from 7 to 8 fathoms. There is a reef to run at the rate of 1 knots at springs and ox vessel is reported to have dragged in consequence. (See chart No. 840.)

Lapétti.—Anchorage may be had N.E. of this village in 12 fathoms, about ½ mile from the shore. (See chart No. 840.)

Tammilu, Pórka and Pilóngo.—Anchorage may be had off these villages in 14 fathoms, about ½ mile from the shore, but landing is ordinarily impossible. (See chart No. 840.)

Andaman Islands.—Interior Harbours.—Port Cornwallis, 5 miles crescent-shaped sheet: recorded to be in 4 to 5 fathoms, but is now 2½ miles. The best depth obtained was 5 fathoms. (See chart No. 1,398.)

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Table island.—Wreck and shoal.—The wreck of the s.s. *Foreland* lies on the shoal ground to the north-westward of the island; from the wreck the western point of Slipper island bears S. 36° E., distant 5¼ cables. There is a depth of 2 fathoms close outside it. (*See* plan on chart No. 825.) p. 334.

CHAPTER IX.

Alguada reefs.—Light.—The light at Alguada reefs is a *white flashing* light showing a flash for *eight tenths of a second* and eclipse *nine and two tenths seconds*. (*See* chart No. 834.) p. 338.

Bassein river.—Wolf rock.—The beacon on the Wolf rock has been done away with and a black can buoy is now moored to the eastward of this danger in 5 fathoms with the summit of Hain ji island bearing N. 16° W. distant 12 cables and Ward point N. 66° E. (*See* chart No. 834.) p. 341.

RANGOON RIVER.—Pilots.—The pilot vessel *Guide* will, when at anchor, at night carry a *fixed white* light at the foretopsail yardarm at a height of 43 feet, and a similar light at the stern 15 feet lower than the above. (*See* chart No. 833.) p. 348.

Elephant point.—Tide gauge has been shifted 1¾ cables from its former position. (*See* chart No. 833.) p. 349.

Rangoon river.—Leading Lights.—Devil's hole leading lights consist of one rear and two front lights each exhibiting a *fixed white* light. The rear light is 9 cables S. 36° E. from Shafraz house, Choki village. The south front light is ¾ cable S. 11° W. and the west front light ½ cable N. 61° W. from the rear light. p. 352.

The south front light in line with the rear light N. 11° E. clears Hmawwun lumps and Da Silva shoal; the west front light in line with the rear light S. 61° E. leads between Da Silva shoal and the point to the northward.

Choki point leading lights are two *fixed white* lights N. 33° W. and S. 33° E. from each other and one cable apart. The rear light is situated $1\frac{8}{10}$ miles N. 44° W. from Shafraz house. They lead between Da Silva shoal and the eastern river bank.

Western Channel leading lights, erected to the westward of Da Silva point are two *white fixed* lights about ¾ cable apart N. 7° W. and S. 7° E. The rear light is at a distance of $1\frac{6}{10}$ miles N. 88° W. from Shafraz house. They lead between Liffey sand and the eastern river bank. (*See* chart No. 833.)

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Buoys.—The Intermediate spit buoy has been removed. (*See* chart No. 833.) p. 351.

A red conical buoy surmounted by staff and St. George's cross is moored between the upper and centre Middle bank buoys to show the extension of the bank. p. 352.

The upper Hastings channel buoy now lies in 6 feet, N. 36° W., 300 feet from its former position. p. 353.

A small green buoy marks the old wreck on Hastings shoal which has 3 feet at low water over it. (*See* chart No. 833.) p. 353.

Tide Gauge.—A new tide gauge has been erected nearly opposite the Syriam lights. (*See* chart No. 833.) p. 353.

Moulmein river.—Rock.—A rock with 19 feet of water on it lies in the Southern approach to Moulmein; from it the west extreme of Green island bears North distant 6½ cables. (*See* chart No. 1845.) p. 374.

The patch buoy.—This buoy has been moored 1¼ cables further to the westward. (*See* chart No. 1845.) p. 374.

Double island.—Light.—The light is exhibited from a height of 120 feet and is visible from a distance of 17 miles. (*See* chart No. 823.) p. 381.

Caution.—As shoaler water than that shown on the chart off Double island has been reported, vessels should navigate in that vicinity with care. (*See* chart No. 823.) p. 381.

Tides and tidal streams.—The flood stream sets to the northward and the ebb to the southward. (*See* chart No. 823.) p. 381.

CHAPTER X.

Goh-keo-jai.—Rock.—A rock on which the ss. *Palmacotta* grounded, with 9 feet of water on it, lies 1½ cables E.N.E. of this island with the N.E. extreme of the island bearing N. 66° W. and the south extreme S. 36′ W. (*See* chart No. 842.) p. 433.

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INDEX.

	Page
Abd-al-Kuri	1
Alguada reefs, light	14
Ammapatam, temporary light	3
Andaman islands	13
Armagon, light	9
Balasor, light	10
Bassein river, Wolf rock	14
Batti Malv	13
Bompoka	13
Calimere point, light	3, 5
Castle bay	12
Casuarina bay	11
Cauverypatam	5
Ceylon, population	1
——— shipping	1
——— trade	1
Chandipur, flagstaff	10
Chauri	13
——— natives	13
Chillumbrum pagodas	5
Choki point, leading lights	14
Chuttram (Chuttrums) light	2
Coast, Pondicherri to Palar river	7
Cocanada bay	9
Coleroon, directions	5
——— point	5
——— river	5
——— shoal	5
Colombo, breakwater light	1
——— harbour works	2
——— pilots' night signals	2
——— time signal	2
Coromandel coast	3
Covelong	8
——— anchorage	8
——— point	8
Cuddalore	6
——— anchorage	6
——— coal	6
——— communications	6
——— flagstaff	6
——— light	6
——— trade and supplies	6
Currents, India east coast	4
Dansborg	5
Da Silva, shoal	14
Devil's hole, leading light	14
Dhamra river, buoy	10
Double island, caution	15
——— light	15
——— tidal streams	15
Dring harbour	12
Elephant point, tide gauge	14
Finger peak	7
Fort St. David	6
Goh-keo-jai, rock	15
Great Nicobar, west coast	11
Great Sober island, causeway	2
Green island	15
Guddilam river	6

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INDEX.

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	Page
Hain ji	14
Hambantotti bay, light	2
Haoin or Bengála	13
Hinám	13
Hoinipoh	12
Hope island, light	9
Horseshoe bank	3
India, east coast, currents	4
Kachál, East bay	12
——— West bay	12
Kamorta, Dring harbour	12
Kar Nicobar	13
Karikal, anchorage	4
——— currents off	4
——— bar signal	4
——— landmarks	4
——— light	4
Karnafuli river	10
Keráwa	13
Koi-hoa	12
Kondul island, anchorage	11
Kopen-hiat	11
Kundugal channel	3
Lafúl anchorage	11
Landmarks, Covelong to Madras	8, 9
Lapáti	13
Laski	12
Little Nicobar, Menchál	11
Madras	6, 7, 8
———, conspicuous buildings	8
Mahabalipur (Seven pagodas)	8
Malacca	13
Masulipatam, light	9
Meghna river, bore	10
Menchál, anchorage	11
Meroe	12
Middle banks	4
Monapallium	9
Moshoit	12
Moulmein river, Patch buoy	15
Moulmein river, rock	15
Mús	13
——, tides	13
Nagar	3
Negapatam, coal	4
———, directions	4
———, landmarks	3
———, shoal	3
Nicobar islands	11–13
North Brother, shoal	13
Olehleh, light	11
Orong	13
Ottivakam hills	8
Oyster reef, beacon	10
———, buoy	11
Palar river	7
———, breakers	7
Palavaram	8
Palk strait, currents	4
Pambam pass, beacons	2
———, Horseshoe bank	3
———, Kundugal channel	3
———, light	2
———, Puma east channel	3
Passages, Aden to Ceylon	1
Patavarakam hill	8
Pedro shoal	4
Perka	13
Perseus reef	12
Póahat	13
Point Calimere, light	3
Pondicherri, anchorage	7
———, district	7
———, landing	7
———, landmarks	7
———, population	7
———, trade and supplies	7
Porto Novo	5
——— anchorage	6
——— communication	6
Pulicat, light	9
Puma, east channel	3

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	Page
Rameswaram island	2
Rangoon river, buoys	15
——————, leading lights	14
——————, pilot vessel, lights	14
——————, tide gauge	15
Rockingham patches	8
Sabang bay, buoys	11
——————, fresh water	11
——————, light	11
——————, wharves	11
Sacramento, light	9
Sadras hills	7
St. Martin's reef	10
St. Thomas' Mount	9
Sánéwya	13
Santapilli, light	10
Seven pagodas (Mahabalipur	8
Shafraz house	14
Slipper island	14
Small Sober island, causeway	2
Sokotra	1
South Arcott district	5
Syriam lights, tide gauge	15
Table island, wreck and shoal	14
Tae-angha	11
Tamálu	13
Teressa	12
Thirumalavasal, flagstaff	5
Tilanchong	12
Tirumani hill	7
Tondi, light	3
Trak and Treis	12
Tranquebar	5
——————, anchorage	5
——————, trade and supplies	5
Trincomalí, mine field	2
Trinkut island	12
Tripalur reef	8
Vakalapudi, light	9
Vizagapatam, light	9
Western channel, leading lights	14
Wolf rock	14

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